

REMARKS/ARGUMENTS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Claims 1-5, 7-21, 23-32, 35, and 36 are amended, and Claims 22 and 34 are canceled. Applicant respectfully submits that no new matter has been added to the application. Claims 6 and 33 were canceled in a previous amendment. After amending the claims as set forth above, Claims 1-5, 7-21, 23-32, 35, and 36 are now pending in this application.

I. Claim Rejections Under 35 U.S.C. § 102(e)

In section 2 of the Office Action, Claims 1-5, 7-11, 13-15, 19-25, 27-29, 31-32, and 34-36 were rejected under 35 U.S.C. § 102 (e) as being anticipated by United States Patent No. 6,744,740 to Chen (hereinafter "Chen"). Claims 22 and 34 have been canceled. Applicant respectfully submits that the rejection with respect to Claims 1-5, 7-11, 13-15, 19-21, 23-25, 27-29, 31, 32, 35, and 36 is moot in view of the claim amendments.

A. Chen fails to teach, suggest, or describe generating a second time stamp at a first node and a third time stamp at a second node, using the first time stamp and the second time stamp to calculate a propagation delay, or selecting a communication path based on the propagation delay

Claim 1, as currently amended, recites:

transmitting a first message from a source node to a destination node along a plurality of paths, wherein the plurality of paths includes a first path, and further wherein the first path includes a first intermediate node and a second intermediate node;

generating a first time stamp and a second time stamp at the first intermediate node, wherein the first time stamp corresponds to receipt of the first message at the first intermediate node and the second time stamp corresponds to transmission of the first message from the first intermediate node to the second intermediate node;

generating a third time stamp and a fourth time stamp at the second intermediate node, wherein the third time stamp corresponds to receipt of the first message at the second intermediate node and the fourth time stamp corresponds to

transmission of the first message by the second intermediate node;

calculating a propagation delay between the first intermediate node and the second intermediate node, wherein the **propagation delay comprises a difference between the second time stamp and the third time stamp**; and

selecting the first path from the plurality of paths for communication between the source node and the destination node based at least in part on the propagation delay.

(Emphasis added). Claim 21, as currently amended, recites:

a plurality of nodes that form a plurality of paths between a source node and a destination node, wherein the source node is configured to transmit a first message to the destination node along a first path of the plurality paths;

a first intermediate node along the first path, wherein the **first intermediate node is configured to generate a first time stamp** corresponding to receipt of the first message at the first intermediate node **and a second time stamp** corresponding to transmission of the first message from the first intermediate node to a second intermediate node along the first path;

the second intermediate node configured to generate a third time stamp corresponding to receipt of the first message at the second intermediate node; and

selecting means configured to select the first path from said plurality of paths for communication between said source node and said destination node based at least in part on a propagation delay between the first intermediate node and the second intermediate node, wherein the **propagation delay comprises a difference between the second time stamp and the third time stamp**.

(Emphasis added). Claim 31, as currently amended, recites:

means for receiving a messages transmitted from a source node along a plurality of communication paths including a first communication path, wherein the first communication path includes a first intermediate node and a second intermediate node;

means for identifying a first time that said message is received at the first intermediate node;

means for identifying a second time that said message is transmitted from the first intermediate node to the second intermediate node;

means for identifying a third time that the message is received at the second intermediate node, wherein the first time, the second time, and the third time are stored in a metrics field of the message;

means for determining a propagation delay between the first intermediate node and the second intermediate node, wherein the propagation delay comprises a difference between the second time and the third time; and

means for selecting the first communication path for communication with the source node based at least in part on the propagation delay.

(Emphasis added). Applicant respectfully submits that Chen fails to teach, suggest, or describe at least “generating a first time stamp and a second time stamp at the first intermediate node, wherein the first time stamp corresponds to receipt of the first message at the first intermediate node and the second time stamp corresponds to transmission of the first message from the first intermediate node to the second intermediate node,” or “generating a third time stamp and a fourth time stamp at the second intermediate node,” as required by Claim 1. Claims 21 and 31 include similar elements. Chen also fails to teach, suggest, or describe “calculating a propagation delay between the first intermediate node and the second intermediate node, wherein the propagation delay comprises a difference between the second time stamp and the third time stamp,” as recited in Claim 1. Claims 21 and 31 include similar elements.

Chen is directed toward a “system 10 [which] designates one or more cluster heads from the wireless devices (nodes).” (Col. 3, lines 66-67). “[E]ach cluster head 30 determines its geographical location, selectively receives and stores location information of the other cluster heads, and calculates stores the locations of all nodes within its own cluster, in order to create an optimal network using the location information to continually update the shortest data paths ... across the wireless network 14.” (Col. 4, lines 3-10). In Tables 2 and 3, Chen

does disclose that a single time stamp entry may be stored “in temporary memory.” (Col. 8, lines 34-36). Chen also discloses that when “packets reach the destination node, the destination node will pick the most optimum path (i.e., shortest # of hops, shortest time, or some other metric), and send a “Path Update” message back to the Source Node through the picked path.” (Col. 10, lines 47-51).

Thus, Chen discloses, at most, a single time stamp associated with each node along a communication path. Chen fails to teach, suggest, or describe generating a first time stamp and a second time stamp at a single node as required by the independent claims. It follows that Chen also fails to teach, suggest, or describe using the second time stamp and a third time stamp generated at a second node to calculate a propagation delay between the first node and the second node. Chen further fails to teach, suggest, or describe using such a propagation delay to select a communication path. Applicant respectfully submits that vaguely describing the use of a single time stamp at a node is not the same as using a plurality of time stamps to calculate propagation delay between nodes. A single time stamp associated with a node cannot be used to calculate propagation delay as that phrase is used in the claims. For at least these reasons, Applicant respectfully submits that Chen does not teach or suggest each of the limitations recited in independent Claims 1, 21, and 31.

Applicant respectfully submits that Claims 1, 21, and 31 are in condition for allowance and requests withdrawal of the rejection. For at least the same reasons, Applicant respectfully submits that Claims 2-5, 7-11, 13-15, and 17-20, which depend from Claim 1, Claims 23-25 and 27-30, which depend from Claim 21, and Claims 32, 35, and 36, which depend from Claim 31, are also in condition for allowance and requests withdrawal of the rejection.

B. Chen fails to teach, suggest, or describe storing a first time, a second time, and a third time in a metrics field of the message as recited in Claim 31

Claim 31, as currently amended, recites that “the first time, the second time, and the third time are stored in a metrics field of the message.” As discussed in section A above, Chen fails to teach, suggest, or describe a first time and a second time associated with a single node as required by Claim 31. Chen also fails to teach, suggest, or describe storing the first

time, the second time, and the third time in a metrics field of the message. For at least these reasons, Applicant respectfully submits that Claim 31 is in condition for allowance and requests withdrawal of the rejection. For at least the same reasons, Applicant respectfully requests withdrawal of the rejection of Claims 32, 35, and 36, which depend from Claim 31.

II. Claim Rejections Under 35 U.S.C. § 103(a)

A. Claims 12, 16, and 26

In section 4 of the Office Action, Claims 12, 16, and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen in view of United States Patent No. 6,115,580 to Chuprun et al. (hereinafter “Chuprun”). Applicant respectfully submits that the rejection is moot in view of the claim amendments.

As discussed above, Applicant respectfully submits that Chen fails to teach or suggest calculating a “propagation delay” between nodes along a communication path by generating a first time stamp and a second time stamp at each of the nodes. Chuprun also fails to teach, suggest, or describe such elements. Chuprun discloses a “system [which] uses ... terrain information and knowledge of network node locations to estimate the quality of node-to-node links in the network (e.g., by estimating path-loss between nodes). The link quality information is then used to determine an optimal connection path between two nodes.” (Col. 2, lines 6-11; emphasis added). Chuprun fails to teach, suggest, or describe generating a first time stamp and a second time stamp at nodes along a communication path or selecting a path based on a propagation delay which is calculated using the generated time stamps.

For at least these reasons, Applicant respectfully submits that the combination of Chen and Chuprun fails to teach or suggest each of the elements required by Claims 1 and 21. For at least the same reasons, Applicant respectfully submits that Claims 12 and 16, which depend from Claim 1, and Claim 26, which depends from Claim 21, are in condition for allowance. Applicant requests withdrawal of the rejection.

B. Claims 17, 18, and 30

In section 5 of the Office Action, Claims 17, 18, and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen in view of United States Patent No. 4,873,517 to Baratz et al. (hereinafter "Baratz"). Applicant respectfully submits that the rejection is moot in view of the claim amendments.

As discussed above, Applicant respectfully submits that Chen fails to teach or suggest calculating a "propagation delay" between nodes along a communication path by generating a first time stamp and a second time stamp at each of the nodes. Baratz also fails to teach, suggest, or describe such elements. Baratz discloses a "route-computing network node [which] uses information in ... [a] topology databases to compute least weight routes (Abstract). As such, the system of Baratz is able to compute "the optimal route through the network (network node to network node) separately from the optimal route from the user end nodes to their adjacent network nodes." (Col. 2, lines 63-66). Baratz fails to teach, suggest, or describe generating a first time stamp and a second time stamp at nodes along a communication path or selecting a path based on a propagation delay which is calculated using the generated time stamps.

For at least these reasons, Applicant respectfully submits that the combination of Chen and Baratz fails to teach or suggest each of the elements required by Claims 1 and 21. For at least the same reasons, Applicant respectfully submits that Claims 17 and 18, which depend from Claim 1, and Claim 30, which depends from Claim 21, are in condition for allowance. Applicant requests withdrawal of the rejection.

Applicant believes that the present application is in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

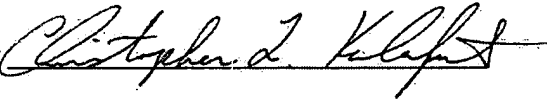
The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment,

to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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